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A Summary of Current Research Program 9/1/65
and Preliminary Report of Research Progress
for 10/1/64 to 8/31/65

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FARMER COOPERATIVE SERVICE
of the
UNITED STATES DEPARTMENT OF AGRICULTURE
and related work of the
STATE AGRICULTURAL EXPERIMENT STATIONS

U.S. DEPT. OF AGRICULTURE
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DEC 7 - 1965

CURRENT SERIAL RECORDS

This research progress report is primarily a tool for use of scientists and administrators in program coordination, development, and evaluation; and for use of advisory committees in program review and development of recommendations for future research programs.

The summaries of progress of USDA and cooperative research include some tentative results that have not been tested sufficiently to justify general release. Such findings, when adequately confirmed, will be released promptly through established channels. Because of this, the report is not intended for publication and should not be referred to in literature citations. Copies are distributed only to members of Department staff, advisory committee members, and others having a special interest in the development of public agricultural research programs.

This report also includes a list of publications reporting results of USDA and cooperative research issued between October 1, 1964, and August 31, 1965. Current agricultural research findings are also published in the monthly USDA publication, News for Farmer Cooperatives. This progress report was compiled in the Farmer Cooperative Service, U.S. Department of Agriculture, Washington, D.C. 20250

UNITED STATES DEPARTMENT OF AGRICULTURE
Washington, D. C.
September 1, 1965

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INTRODUCTION

The function of the Farmer Cooperative Service is to help farmers build effective cooperative business enterprises to serve their needs in marketing farm products, purchasing farm supplies, and obtaining other needed services. The Service conducts economic research and does educational and advisory work to assist the 3 million members of the 8,900 marketing, purchasing, and related business service cooperatives.

The Service acquires, analyzes, and publishes information about farmer cooperatives and disseminates this information to these and other rural associations. Studies are made to improve cooperatives' organization structure, management, financing, and operating methods. Marketing research is conducted on methods, costs, and other aspects of processing, distribution, and selling of farm products by cooperatives.

On August 31, 1965, the Farmer Cooperative Service had a total authorized staff of 96, including 53 professional economists and 1 marketing specialist. All staff for research, advisory, and educational work is located in Washington, D.C. In addition, the Service supervises marketing research contracts equivalent to one professional man-year per year. This report concerns the research program of the Service and therefore the narrative does not include discussion of advisory assistance that is not of a research character, or include educational activity. The manpower reported here does not include persons working in Washington, D.C., Brazil, and Paraguay under A.I.D. authorizations.

The three program Divisions -- Marketing, Purchasing, and Management Services -- correspond to the three work areas in this report. Much of the work of the Service is conducted in close cooperation with land-grant colleges, State extension services, State departments of agriculture, and banks for cooperatives. Most of these arrangements are informal, but some of the research work with experiment stations is conducted under contract. At the present time, the Service has six research contracts with four land-grant colleges.

Cooperatives represent a major method for meeting the marketing and purchasing problems of family farms and for strengthening their bargaining position. Farmers can get higher returns for the products they market and save money on supplies and services they purchase by increased use and constant improvement of their cooperatives, which are devoted specifically to these objectives. Because cooperatives have these significant and distinct relationships to market structure and practices, the Service is compiling data on these topics for staff of the National Commission on Food Marketing. Most data requested by Food Commission staff are available through ongoing programs of the Service. Research concerning marketing coordination and cooperative potentials in dairy products and fruits and vegetables is being expedited and expanded in some cases to obtain information for the Food Commission.

Cooperative members urgently need research findings on a wide range of topics to guide them in securing the best potential performance and results through the cooperative method of operation. Marketing cooperatives must in some commodities create entirely new systems extending from procurement to processing to sales methods, all with a renewed emphasis on the quality, quantity, and service demands of mass merchandising. Purchasing cooperatives must make comparable adjustments to changes in farming equipment and methods. There is increased interest in and use of farm service activities by cooperatives.

Research is needed to identify in specific terms the probable areas of greatest benefits to members, and effective operating policies and methods. Opportunities in low income areas call for special attention.

Cooperatives need to improve their organization structure and develop management competent to deal with increasingly complex problems and operations. More attention needs to be given to membership participation so as to maintain the distinctive cooperative features arising from member control. Cooperatives also must capitalize on the potential benefits of transportation innovations. In general, however, cooperatives must meet demands for improved transportation services while costs continue to increase.

Some recent examples of progress are as follows:

Cooperative Criteria. There has been a growing interest in developing a better understanding of the basic features of a cooperative organization. A study was made, with the cooperation of other agencies in the Department, to establish criteria that will identify distinguishing characteristics of cooperatives. On this basis a "Cooperative Criteria" report was prepared and issued. This report will enable agencies of the Department to carry out various regulatory and related programs within a more common framework. The report also will assist cooperatives to improve features of their organization and performance, and assist in their working contacts with the Department.

Cooperative financing. Analysis of data from about 450 regional cooperatives showed their total assets were \$3 billion in 1962. Fifty percent of this was financed by net worth. Their net savings were \$288 millions, or 19.2 percent of net worth. Findings from this research provide much needed basic data on cooperative financing.

Improved methods and organization for cotton cooperatives. A series of research projects is nearing completion that point to methods of reducing ginning cost to farmers by \$5 a bale. Value of cotton can also be increased by \$1 to \$5 a bale through scientific blending. The various operating methods studied include choice between single and multiple gins, basket storage of seed cotton, and central ginning. Potential savings to all U.S. cotton farmers from a full re-structuring of cotton ginning methods and organization for this purpose appear to be about \$100 million per year.

Bulk feed truck operations and cost. Preliminary findings in the study, including 110 bulk feed trucks operated by seven farmer cooperatives show: (1) Truck operating costs, not including administrative expenses, averaged 48 cents a mile operated, (2) operating costs averaged \$2.89 per ton of feed delivered, and (3) direct costs were over three-fourths of total operating costs.

Pesticide formulation and distribution. Findings on this new cooperative service were published in a study of the work of two cooperatives in the South in mixing and distributing liquid pesticides. One cooperative achieved savings of 5 percent for its members, and the other realized 15 percent savings. Major advantages to members were improved service and quality control. Total assets needed are moderate and within reach of other cooperatives.

FCS Bulletin 1, "Farmer Cooperatives in the United States." This publication provides a comprehensive discussion of farmer cooperatives in the 1960's. The report is a reference document on the development, present status, and organization of agricultural cooperatives in the various commodity marketing, purchasing, and service fields.

Knowledge and attitudes concerning cooperatives. Research is underway in Kansas to identify factors and techniques that motivate member loyalty and bring about public understanding. Public and member information programs of Kansas cooperatives were reviewed. In a second research phase, it was found that urban people had good understanding, mild feelings, and favorable attitudes about the nature and operations of cooperatives. Questions concerning functions of cooperatives and public policy revealed less understanding and stronger and less favorable attitudes. This research will provide valuable knowledge and recommendations for future information programs.

AREA NO. 1: COOPERATIVE MARKETING

Problem: Farmers continue to increase their use of cooperative marketing.

These cooperative operations are conducted in a marketplace where handling and processing, transportation, and distribution technology is changing rapidly, and market organization and practices are undergoing major changes. Farms themselves have changed. Farmers and their cooperatives need research results that relate to these developments and new conditions to assist them in marketing efficiently. Such research will assist farmers to strengthen their bargaining power, increase marketing efficiency, and meet effectively the quality, quantity, and service needs of today's food and fiber marketplace.

Cooperative marketing is a direct and major way for farmers to get maximum returns from their products. Farmers own and operate cooperatives specifically to increase their income from crops and livestock. Gains are not automatic, however. Cooperatives must plan and actually conduct the specific marketing program and services that will yield best returns for their members. Marketing cooperatives must know what the consumer demands, as reflected in the market. They must be able to estimate the cost of serving the market in different ways. They must understand the possibility of major economies in a well-managed joint sales program, and understand the methods and potentials of bargaining. Management must achieve minimum costs through appropriate organization, good use of existing plant and personnel, and the correct selection and use of new equipment and methods.

USDA PROGRAM

The Department conducts a continuing long-range program of basic and applied research and technical assistance on problems of marketing farm products cooperatively. Studies are made on the organization, operation, and role of farmer cooperatives in marketing. While most of the research is done directly with cooperatives, the results are generally of benefit to other marketing firms. The work is centered in Washington, D.C. Many of the studies, however, are done in cooperation with various State experiment stations, extension services, and departments of agriculture.

Federal professional man-years devoted to research in this area totaled 19.6. Of this number, 0.9 was devoted to citrus, 1.4 to cotton, 3.8 to dairy, 1.4 to deciduous fruits, 1.7 to grain, 2.0 to livestock, 2.2 to oilseeds, peanuts, and sugar, 1.2 to potatoes, 3.0 to poultry, 1.5 to vegetables, and 0.5 to wool.

Research also is conducted under contract with land-grant colleges, universities, cooperatives, and private research organizations. This report includes work conducted during the present period, or release of results of

work earlier completed, through contract research performed by universities in Iowa, Montana, North Dakota, and West Virginia, and by two private research companies.

STATE EXPERIMENT STATION PROGRAM

Most of the commodity marketing research of the agricultural experiment stations is helpful to marketing cooperatives. Some projects, however, deal specifically with cooperative marketing problems, opportunities, and impacts. At the present time 10 States have 12 research projects in cooperative marketing. Their commodity distribution is as follows: grain-2, tobacco-1, fruit and vegetables-1, livestock-2, and cross-commodity-6.

Some projects evaluate the performance and organizational features of cooperatives. Different methods of pooling and their problems are studied so as to develop helpful principles. In the analysis of cooperative operations and in working with directors and managers, efforts are made to identify and solve the many problems that are arising. Particular attention is given to what services or functions should be provided by cooperatives. There is interest in learning more about the attitude of members and nonmembers toward cooperative marketing, especially the differences in these attitudes.

In the last few years more attention is being given to the role of cooperatives in achieving bargaining power for farmers. In connection with market structure studies, special attention is being given to the impact of cooperatives on market conduct and performance.

The total research effort on cooperative marketing in the 10 States is 2.5 professional man years.

REPORT OF PROGRESS FOR USDA AND COOPERATIVE PROGRAMS

A. Coordination of marketing

Farmers and their cooperatives need to adapt their marketing methods to the requirements of large-scale buyers, mass merchandising, and other changed conditions. In many cases the coordination of marketing of a number of cooperatives, marketing the produce of hundreds or thousands of farmers is needed to satisfy these needs and improve returns to farmers. Such coordination may be accomplished by establishment of joint sales agencies or by other methods. Research to determine the problems and needs, and to develop guides for adopting new practices, included work with several commodities.

1. Dairy. Cooperatives market about three-fifths of all milk marketed, either as milk or manufactured dairy products. With continued improvement in plant technology and transportation systems, markets are becoming less defined. During the past year, there was a marked increase in mergers of the major dairy cooperatives.

A study of the extent and types of coordination of marketing activities among dairy cooperatives is underway.

2. Deciduous fruit and tree nuts, vegetables. A study in depth of the organizational characteristics and operating methods of selected marketing agencies which have successfully marketed fruits and vegetables for member associations on a joint basis is continuing. Problems and possibilities of these associations are being evaluated and guides will be developed for other cooperatives interested in a coordinated marketing program.

3. Grain. Changes in freight rates, transportation facilities, and the directions of grain movement call for major changes in grain marketing. A study was made of the economic feasibility of constructing a cooperative terminal export elevator on the Gulf Coast. These regionals now ship around 100 million bushels of grain to the area, which should support an elevator for the benefit of producer-members. A study of cooperative grain marketing and transportation in the Pacific Northwest was completed, including suggestions for cooperative river shipping houses on the Columbia and lower Snake Rivers. Recommendations were made for change in the operations of a multipurpose local cooperative in Virginia by adding a local elevator and changing some of their grain-buying practices. Continuing is a study for a large regional farm supply cooperative in Tennessee regarding the feasibility of setting up a coordinated grain marketing program, including the operation of local cooperative elevators.

4. Potatoes. A study is underway of the feasibility of the merger of two Northeast cooperatives that market potatoes and purchase farm supplies for growers.

5. Poultry. Research was underway to determine the advisability of coordinating or combining all or part of the operations of three New England producer organizations.

B. Improving cooperative sales, distribution, and pricing methods

Wholesale and retail marketing practices are continuing to change rapidly, and there have been fundamental changes on the farm. For these reasons sales and distribution and pricing methods need to be studied carefully to plan and realize methods and policies that are technically efficient and obtain good returns for producers. Bargaining methods and pooling are two topics that require major research emphasis. Research on these problems included work in several commodities.

1. Bargaining (dairy, deciduous fruit and tree nuts, eggs, poultry, sugar beets, and vegetables). Research concerning bargaining methods and results was expanded to include dairy, egg, poultry, and sugar beet bargaining. This research seeks to appraise the status, role, and potentials of cooperative bargaining as a means of stabilizing and enhancing the incomes of producers.

2. Citrus and subtropic fruit. Research to determine the impact of the 1962 Florida freeze on pooling practices has been completed. This study shows growers' on-tree returns were higher, and crop losses were lower, where their marketing cooperative had a large volume operation supported by adequate harvesting equipment and an established processing affiliation. Grower benefits were maximized under the single pool arrangement which allowed management flexibility in marketing the crop regardless of end product use, and under an adjusted method of dispersing pool returns which allowed the largest, most accessible and least damaged groves to be harvested first with pools adjusted for any unpicked fruit. This research was conducted under contract with the University of Florida.

3. Dairy. A study has been initiated that will examine the sales methods and distribution practices used by dairy cooperatives and the extent to which they coordinate their sales of manufactured products. The main objective will be to determine how they may better coordinate distribution of manufactured products to increase returns to farmers.

A study of pooling principles and practices was reactivated under a new project leader. This study will examine the effect of various pooling methods on equity among members and marketing efficiency in cooperatives subjected to changing marketing conditions.

Assistance was provided a newly organized federation of three cooperatives in developing procedures for pooling proceeds to members. The study indicated that the key to an acceptable pooling system was a full understanding of the marketing problems involved.

4. Dry edible beans and peas. Analysis continued of ways for selected cooperatives marketing dry edible beans and peas to improve their marketing and distribution effectiveness. This work was conducted under contract by a private research organization.

5. Poultry. Research was continued concerning opportunities and methods to improve fowl marketing by cooperatives and other handlers. Findings indicate that farm prices obtained by producers appear low in relation to utilization value of fowl. The fowl market appears to lack effective competition, particularly to get producers a share in the extra margins accruing from further processing of fowl. Cooperative effort by producers themselves establishing and operating slaughter and further-processing facilities for fowl would potentially gain participating producers a direct share in improved returns, and through competitive effect of the cooperative, raise the price to other producers.

Research findings concerning pooling and producer payment practices of egg marketing cooperatives were being prepared for publication. Analysis included the relation of pricing differentials to cost factors, including size of shipments. It was found that cooperatives have seldom based pricing

differentials on study of cost factors. Analysis of individual collection, plant, and office costs by each association would give it the basis for a system of equitable pricing differentials. Such differentials are effective in holding and attracting large producers.

6. Vegetables. A study of retail chainstore and wholesale produce buyers' preferences for celery was completed. These buyers pointed to the need for adequate volumes of uniformly high quality product backed by a well-organized promotion and sales effort. This study was conducted under contract with a private market research firm. Research findings have been published by Farmer Cooperative Service.

7. Wool. A study conducted under contract with Iowa State University showed that in 1963, Iowa farmers marketed about 25 percent of their wool through cooperatives. The smaller growers showed more tendency to market their wool to feed dealers, hardware stores, and other local wool dealers than did the larger sheep producers. Many smaller sheepmen did not consider the value of their wool to be an important item of their farm income.

Results of a nationwide study of the operations of cooperative wool pools were published. The study concluded that pools enable growers to market their own wool more effectively and increase their net returns from wool by 3 to 4 cents a pound. Largely because of changes in the wool marketing system, growers with small farm and range flocks are showing new interest in this century-old form of marketing organization. The study led to suggestions for improving pool organization, assembly, grading, selling and management practices.

C. Potentials in cooperative marketing

The present and potential role of cooperative marketing requires study in several commodity areas. Current information on cooperative operations can be related to production and marketing conditions. The objective of such research is to develop recommendations about operations and services of existing cooperatives and particularly to identify opportunities for farmers to increase their marketing returns by developing significant new areas of cooperative operation.

1. Citrus, deciduous fruits, potatoes, tree nuts, and vegetables. A nationwide study is underway to obtain basic data for an analysis of present status and trends in the cooperative marketing of fruits, vegetables, and nuts. This study also seeks to evaluate the potential of cooperatives for increasing their operating efficiency and market effectiveness through integration, coordination, consolidation, expansion, or other means.

2. Dairy. A study of cooperative marketing activities and facilities is underway. This research will provide benchmark data on cooperative plant location, major equipment, and operating capacity. It will analyze the

potential benefits to dairy farmers from increased coordination of their current activities or through other changes in organization and major methods of operation.

3. Deciduous fruit. Studies were made of cooperative fruit marketing and storage operation potentials in New Mexico and New York and technical assistance on organizational structures, and plans of operation were developed.

4. Forestry. Work continued on determining the feasibility of alternative kinds of forest-based activities and enterprises in Maryland, West Virginia, and Pennsylvania. This work is being performed under contract with West Virginia University.

A report was issued on the steps to follow and factors to consider in identifying the need for forestry associations.

5. Livestock. Studies under contract with universities in Montana and North Dakota to determine the economic feasibility for cooperative feedyards and slaughter facilities were completed. These studies indicated that establishment of slaughter plants would not be as successful as feedlots because most areas now have excess slaughtering capacity. However, construction and operation of new, modern slaughtering facilities that are more efficient than the existing ones may be feasible. Securing farmers' full support of these undertakings is essential for operational success.

6. Potatoes. A study was initiated to determine and evaluate the role of cooperatives in the market structure of the major potato producing areas of the United States. The study seeks to examine market conduct and performance and the cooperative form of enterprise as an influence on structural dimensions, efficient marketing, and the improvement of farmers' income. This intensive study of potato marketing supplements data on potato marketing obtained in the nationwide study of status and trends in fruit and vegetable marketing.

7. Poultry. Study of the operations and potentials of broiler auctions was continued. Preliminary findings indicate that while most broiler auctions have been discontinued, several have made substantial contributions to the pricing of broilers. Consideration is being given to the possibility of selling processed broilers at auction where market outlet conditions appear favorable.

The feasibility of a proposed cooperative turkey processing operation in the Midwest was analyzed and findings reported to grower leaders.

8. Vegetables. A study was made of a proposed chile processing facility in New Mexico. It was determined that the economic prospect for processing and marketing chile was such that any cooperative venture in this area would be attended with high risk.

D. Improving operating and handling methods

Research was underway in several commodity fields to examine new methods, equipment, and structures for efficient and safe processing and storage of agricultural products by cooperatives.

1. Citrus. Work continued on a study to determine the nature and extent of large scale buyers' requirements -- particularly those made on a specification basis -- for Florida fresh citrus.

2. Cotton. Research continued underway comparing costs of ginning by (1) conventional, (2) basket storage, and (3) central ginning methods. Findings indicate potential savings of about \$5 a bale for central ginning over conventional gins under appropriate conditions. Basket storage systems offer a reduction of a few cents to over \$1.50 a bale as compared to conventional ginning (on 6,000 bale volumes), particularly if the basket system includes an unloading system with medium to high capacity. Basket storage systems have substantially lower costs than second gins with low or inadequate volumes.

3. Dairy. Dairy manufacturing cooperatives are caught up in the change to more diversified multiproduct operations. The managers of these operations must rely on cost and information systems to provide data on which to base decisions. A study has been initiated with the purpose of providing cooperative management with a standard departmentalized cost accounting system that will help them to control costs and improve efficiency and quality of service.

A case study was made of the operating practices and procedures of a fluid milk packaging cooperative that distributes its milk through wholesale and retail routes and through its own dairy stores. Findings indicate that the long-run interests of farmer-members were best served by the cooperative placing greater importance on selling its products through its own stores.

A system of product accounting was developed to improve the operating methods of a marketing federation.

A case study was made to determine the economic feasibility of a cooperative creamery adding a milk drying operation. Findings indicated that the patrons' best long-run interests may be served by the cooperative joining with other cooperatives in developing and utilizing large, efficient plant facilities.

4. Grain. The report on the economics of flat storage at Kansas country elevators was distributed. This was a joint study with Kansas State University.

5. Livestock. Work continued to analyze the alternatives available to livestock producers and cooperatives for integrating the production and marketing of livestock and meat. Preliminary results indicate opportunities for producers to benefit from maintaining control over their livestock through additional steps in the marketing chain. Several farmer groups and cooperatives were provided information to assist them in determining the feasibility of using such alternatives as feedlots or slaughtering and processing facilities.

Studies were made of four livestock cooperatives to assist them find ways to serve members better by improving operating efficiency, adding needed services, adopting new handling methods, or merging operations with another cooperative.

6. Oilseeds. The cost of electric power at cottonseed oil mills under different electric rate schedules was analyzed. Different rate schedules result in widely different total cost, it was shown. Managers may use these findings to obtain more equitable power rates in some cases.

Analysis of operating costs of cooperative cottonseed and soybean processors continued. Findings help operators to locate inefficient features of their operations and on the basis of this information, act to reduce costs, and thereby increase returns to growers. Based on the work and experience with these processors, we continue to handle requests from interested groups on the feasibility of constructing and operating soybean processing plants. These reports also are used by other agencies in the Department of Agriculture and by the banks for cooperatives serving these mills.

7. Potatoes. A study of wholesale buyers' practices and preferences for Virginia white potatoes was completed and a report covering the findings of the study was published. The study showed that Virginia growers and shippers may improve their industry position by adhering to more strict grading and sizing of product and by initiating programs for more orderly marketing. This study was conducted jointly by Farmer Cooperative Service and the Virginia State Department of Agriculture.

8. Rice. Study of drying and storing rough rice on-farm and off-farm continued. Preliminary findings show little differences in quality effects between the stationary and multipass facilities. Commercial dryers tend to perform better on grade, and on-farm dryers on milling quality.

E. Improving the organization, financing, and management of marketing cooperatives

Studies were made to determine ways to improve the efficiency and assist cooperatives improve their services by analysis of organization, financing, and management practices.

1. Cotton and oilseeds. A study was completed of operations and the organization of cotton and cottonseed cooperatives in the Lubbock area of Texas. Findings showed these cooperatives were successful because (1) there was an economic need, (2) there was good cooperation among members and management of the different types of cotton cooperatives, and (3) the objective of serving members was adhered to through the years.
2. Dairy. A study was made of the overall operation of a dairy bargaining cooperative. The analysis indicated that failure to make equitable charges for an expanded service program led to a decline in market position and bargaining strength.
3. Grain. Although delayed to some extent, a study is underway on inventory controls, practices, and responsibilities at local cooperative elevators. The annual analysis of the operations and financial status of regional grain cooperatives was continued. These cooperatives are handling increased volumes of grain and with increased emphasis on merchandising, both domestic and export. In view of the rapidly changing transportation situation, several regionals have acquired both water and rail transportation equipment.
4. Oilseeds. A general study was initiated of the organization and operations of cottonseed and soybean oil processing and marketing cooperatives.
5. Poultry. Study was continued of the organization and operations of a large, integrated regional marketing and supply cooperative. Preliminary findings include a case history of adjustments to meet changing conditions, and the relation of financial planning and conditions to changing operations.
6. Tobacco. A study of the organizational and operational features of 15 cooperative looseleaf tobacco auctions was completed. Findings stressed the need for these associations to provide further services to patrons and to place increased emphasis on acquiring a sufficient volume of quality tobacco for sale.

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AREA NO. 2: COOPERATIVE PURCHASING

Problem: Farmers are spending increasing amounts each year for inputs such as production supplies and farm services. Cash expenditures for supplies, insurance, interest, irrigation, food processing fees, locker rentals, and similar services account for about 64 percent of total expenditures for farm operations. With the trend to fewer but larger farms, there is a shift in emphasis from labor to various types of capital inputs. Many farmers need to give attention to reducing costs to help realize reasonable net incomes.

To help procure the types of supplies and services they need at minimum costs, farmers have formed some 15,000 purchasing cooperatives. These associations need research directed at ways they can streamline their supply systems from point of production to the farm. They also need to adjust services and pricing practices so that small, medium, and large operators may be served on the basis of costs of providing the services each desires.

The modern farm also is seeking certain farm services as a means of increasing farm productivity and net income without major capital expenditures. Lime and fertilizer spreading, custom feed mixing, production contracts, credit, irrigation, custom freezing, and insurance are among the many services that are now being provided in some areas. Growing urbanization and the opportunity to serve both farm and nonfarm patrons also suggest the need for research on organizational structure and policies and distribution systems of cooperatives that will result in the most effective services and benefits for such rural residents. Special attention needs to be given to possible ways of assisting those in poverty areas.

USDA PROGRAM

The Department has a continuing program of basic and applied research and technical assistance to aid farmers in improving cooperative purchasing of production supplies and related farm services. Research efforts are directed to improving organizational structures, and procurement and distribution systems; determining the role of cooperatives in helping farmers purchase needed supplies and services; and developing efficient operational methods applicable to the needs of modern agriculture. Most of the work is conducted directly with farmers, cooperatives, and groups of farmers interested in helping themselves through cooperative efforts. Research results, however, generally are applicable to other farm supply and service organizations.

The work is centered in Washington, D. C., but some of the studies are done in cooperation with various State experiment stations, extension services, and departments of agriculture. During the period of this report, contracts were in force with universities in Illinois, California, and Iowa, and one private research company.

Federal professional man-years devoted to research in this area totaled 6.1. Of this number, 4.0 were devoted to farm production supplies, 0.6 to farm services and 2.5 to frozen food lockers and provisioning.

STATE EXPERIMENT STATIONS PROGRAM

Currently six States have one project each on cooperative purchasing. Because of the rapid changes taking place in farming and agribusiness, one station is investigating the farm supply and service needs of farmers from the standpoint of needed adjustment in the "product mix" of the purchasing cooperative.

Several States are attempting to determine the principal factors affecting the relative profitability of local purchasing cooperatives for the purpose of developing operating guides for cooperatives under different economic settings. Cost-volume relationships in the farm supply business are also being investigated. With the increasing financial pressure on farmers, credit management is the subject of research attention at several stations.

Group or pool buying of feed ingredients by farmers is under study to find out the implication of this development to other cooperatives providing feed ingredients to their members.

It should be noted that the State stations do a considerable amount of research on feeds, fertilizers, seeds, farm equipment, and farm supplies that is of value to purchasing cooperatives but which is not reported here.

The total research effort in cooperative purchasing is 3.5 professional man-years.

REPORT OF PROGRESS FOR USDA AND COOPERATIVE PROGRAMS

A. Coordination of farm supply services

Farmers in many areas can improve their purchasing power by coordinating the operations of their farm supply and service cooperatives. This can be done by federating local retail cooperatives into regional wholesale and manufacturing cooperatives, by merging or otherwise combining cooperatives; by establishing cooperative management services, and by joint buying or manufacturing activities.

Four studies were made to determine the feasibility of combining resources of a total of 13 cooperatives handling farm production supplies. Total additional savings for farmers by the fifth year after unification were estimated to be \$400,000 or more.

Findings indicated that long-term benefits would be much greater than those resulting in the first or second year after merger. The unified organizations should soon acquire more competency and depth in management, better organizational structures, stronger financial positions, and more efficient use of facilities and employees.

The studies involved considerable research on internal operations and trends of the cooperatives and on external agricultural and economic factors pointing to the need for mergers. Experience from the use of different research approaches and procedures should help other cooperatives and research agencies interested in examining the feasibility of mergers or acquisitions.

B. Improving sales and distribution methods for farm production supplies

Purchasing cooperatives constantly need to be studying ways of increasing volume to lower per unit handling costs, and methods for developing more effective systems of distributing supplies and providing services to rural users.

1. Feed. A study of 16 local farmer buying groups in Illinois was almost completed. Most groups started by buying feed ingredients for members who had farm mills, but later they began purchasing a number of other farm supplies. The groups had from 11 to 43 members whose farms were twice the size of the average farm in the State, and operators were 10 years younger than the average farmer in Illinois. The principal benefits members realized were: (1) Savings in costs of supplies, (2) ability to obtain some products such as feed additives not readily available before, and (3) better knowledge of ingredients included in livestock rations and more flexibility in changing the composition of rations.

Another study of feed bargaining groups was initiated in California where poultry producers agree on formulas and then bargain with mills to manufacture and deliver the feed to their farms.

A study of the practices of cooperatives in pricing feed at the wholesale and retail level is underway. Special attention is being given to quantity discounts for large versus medium and small purchases of feed and to charges for various services. Field interviews with a number of cooperatives in the eastern half of the United States indicated wide variations in policies and practices. All of the regional wholesale cooperatives in the study allowed their retail outlets some type of price concession based on quantities of specified types of feed. Approximately three-fourths of the retail outlets allowed quantity discounts on individual volumes of feed purchased and two-thirds also gave volume discounts on annual purchases.

2. Fertilizer. A study of the practices of cooperatives in pricing fertilizer at the wholesale and retail level is underway. Special attention is being given to quantity discounts for large versus medium and small purchases of feed and to charges for various services. Field interviews with a number of cooperatives in the eastern portion of the country indicated wide variations in policies and practices. All regional wholesale cooperatives studied gave some type of price concessions based on quantities of specified fertilizers to their retail outlets.

These price concessions took the form of quantity discounts on individual transactions and annual purchases, discounts on preseason purchases, and price adjustments to meet competition. Usually discounts were most frequent and largest by retail outlets in areas where size of purchases varied most and where competition was keenest for the volume of the larger farmers.

C. Potentials of cooperatives in farm production supplies and farm services

In several farm supply and service fields, studies are needed of the present status and potential role of cooperative purchasing. Research should indicate areas where cooperatives may be of further service to farmers or where additional savings from integrated operations may be realized, and also provide data needed in planning and implementing cooperative programs.

1. Fertilizer. A study of the present position and potential role of cooperatives in the fertilizer industry was continued. Preliminary findings indicate that cooperatives are now supplying about 25 percent of the plant foods farmers buy, and that they are producing a large share of their basic nitrogen supplies but little basic phosphate and no basic potash materials. To exert a greater influence on the expenditures of farmers, cooperatives will need to undertake more basic operations. The consumption and production of all three major fertilizer materials are increasing rapidly and likely will continue to do so for the next several years.

2. Containers. The second phase of a study to improve methods of procuring containers for fresh fruit and vegetables is underway. Field data were obtained and the analysis of information from 47 marketing cooperatives in 6 North Central and Northeastern States was nearly completed. The objective of this study is to determine if there are potential savings and improvements in services in cooperative procurement similar to those by cooperative systems in the West and Florida. The first phase of this study indicated such savings have ranged between 5 and 15 percent, depending upon type of containers and procurement methods. A contract was let with a private research agency for a similar study of methods of improving the procurement of containers for marketing processed fruits and vegetables.

3. Farm services. A study was initiated to evaluate the nature and adequacy of cooperative services available to low-income farmers and to determine the potential for more effective and expanded cooperative services for low-income farm and nonfarm rural people.

4. Frozen food provisioning. A nationwide study is underway of trends in size, location, facilities, operations, and custom services of the frozen food locker and freezer provisioning industry. Findings will assist cooperatives and other firms in adjusting to current and prospective market conditions. Preliminary estimates indicate that industry sales of products and services increased in the past 5 years from \$845 million to \$860 million, volume of meat processed increased from 1.8 to 1.9 billion pounds, and livestock slaughter volume increased from 2.8 million to 3.2 million head.

D. Improving operating and handling methods for farm production supplies and frozen food processors

Farmers are interested in ways that supplies and services may be provided in the least cost manner and also by methods that will save them time and labor on the farm.

1. Pesticides. A study of the formulation and distribution of liquid pesticides by two cooperatives in the South was completed. It showed that savings of 5 percent were realized by one cooperative and 15 percent by the other, but the major advantages to farmers were improved service and quality control. Liquid formulation was a relatively inexpensive operation with one association using total assets of \$400,000 for providing \$1 million worth of pesticides, and the other using \$1 million for handling sales of over \$3 million last year. The depreciated value of buildings and equipment, however, was only \$73,000 in one association and \$140,000 in the other.

2. Feed. A study of the use of bulk feed relay stations is underway. Cooperatives in the Northeast added a number of such stations for extending the movement of feed in bulk from their mills during the past year.

3. Seed. A study of the feasibility of bulk handling of seed is underway. Preliminary findings indicate bulk receiving of seed from farmers is practicable and helpful, but distribution from plants to warehouses has not been feasible with present facilities and equipment.

4. Frozen food provisioning. A study is underway of the role and methods of locker and related processing cooperatives in processing and merchandising locally produced food products. Findings will assist cooperatives improve their efficiency and adopt practices that will contribute to their success in the light of rapid economic changes in rural areas.

E. Improving the organization, financing, and management practices of farm supply and service cooperatives

Studies were conducted to determine ways of strengthening the structure, finances, and management of purchasing and service cooperatives and frozen food provisioners and thus improve their effectiveness in serving farmers and other rural residents.

1. Farm supplies. A handbook containing information on the organizational structure, operations, financial position, and facilities of 22 major regional cooperatives handling supplies was completed. These associations realized net savings of \$61.4 million on sales of about \$1.3 billion of supplies and \$350 million of farm products in 1963, the latest year covered. Such savings were equal to about 3.7 percent on sales and 12 percent on their net worth of \$509 million. The group paid in cash \$44.5 million in dividends, refunds, and to retire revolving capital in 1963. This report should provide smaller cooperatives with guidelines as to structure, types of supplies, and other features of large successful associations.

A study was initiated in a central State to determine factors responsible for strong and weak supply associations. Both internal and external factors will be examined in depth in contrasting associations that are located near each other in the same type of farming and trading areas.

2. Frozen food provisioning. Work is underway to develop methods for frozen food locker and related small processing firms to estimate the market potentials for their products and services. This work will assist management in planning changes in facilities and operating methods. This study is being conducted under contract by Iowa State University.

3. Production services. Analysis continued of the PCA Co-op-Patron Credit Plan which provides a method for making credit available to farmers at the store where they purchase production supplies. Under the program a farmer cooperative is authorized to fill out PCA loan papers for patrons who purchase supplies on credit. By guaranteeing collection of these accounts, the cooperative is able to extend "over-the-counter" credit without waiting for PCA action on the individual loan application. Analysis of experience shows that success of the plan depends primarily on three factors: (1) Cooperatives need to adopt and enforce a realistic and definite credit policy; (2) both the cooperative and the PCA need to make a sincere effort to establish the plan and interest farmers in it; and (3) the cooperative and the PCA need to keep each other fully informed of its activities relating to the program. Findings of this research, conducted in cooperation with Farm Credit Administration, are being prepared for publication.

4. Rural credit unions. Analysis of the status, activities and accomplishments of rural credit unions continued. On December 31, 1963, there were 670 rural credit unions operating in 46 States. Share savings amounted to \$112,987,589. Of this amount \$98,797,430 had been loaned to members to help finance the purchase of farm production supplies and needed consumer goods and services. More than half of these rural credit unions had been sponsored by farmer cooperatives and farm organizations. Rural churches and other rural organizations had sponsored the remainder.

Information was also compiled on the legal status, organization structure, and operating methods of rural credit unions. This information will be published for use by vocational agriculture schools, rural areas development committees, poverty program workers, and other individuals and groups needing general information on rural credit unions.

PUBLICATIONS REPORTING RESULTS OF
USDA AND COOPERATIVE RESEARCH

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AREA NO. 3: COOPERATIVE ORGANIZATION, MANAGEMENT, AND TRANSPORTATION

Problem: Many new cooperatives are now being organized. Most of these are small-scale enterprises serving low-income rural people. At the same time many existing cooperatives are increasing in size, quite often through merger, acquisition, or consolidation. These developments, added to the wide variety of continuing problems facing cooperatives, create an increased need for them to improve management techniques and organization structures, to train employees, orient and educate directors, and to improve the understanding of cooperatives by potential members and the general public.

Research is required to aid cooperatives in meeting these challenges more effectively. In particular, research is needed in dealing with special cooperative problems such as -- more equitable distribution of patronage refunds; communications; development of educational materials; financing methods; income tax changes; mergers, consolidations, and acquisitions; and transportation with special emphasis on costs, traffic management, and physical distribution problems.

There is also a need to determine the economic feasibility and to develop methods of organization and operation for new types of cooperatives, especially in low-income rural areas. This work will aid in the implementation of the Economic Opportunity Act, Public Works and Economic Development Act, the Appalachian Act, and the many special programs of the U.S. Department of Agriculture and other Federal and public agencies that work in the area of cooperative development.

USDA¹ PROGRAM

The Department has a continuing program of basic and applied research and technical assistance to help farmers strengthen the organization structures of their cooperatives, improve their management, build effective membership relations, and develop and maintain efficient cooperative transportation services. Studies are made of financing methods, managerial and director roles and performance, internal control procedures, cooperative trends, membership attitudes and communication, patron refund equity, mergers and consolidation, and transportation methods and costs including the location and efficiency of distribution facilities. The program includes increased emphasis on study of feasibility of proposed new enterprises to assist farmers in low-income rural areas, as part of the Rural Areas Development Program.

The work is centered in Washington, D.C. Many of the studies, however, are conducted in cooperation with State colleges, experiment stations and extension services, and departments of agriculture.

Federal professional man-years devoted to research in this area totaled 9.0. Of this amount, 6.0 were devoted to work on organization and management of cooperatives and 3.0 to transportation.

Research also is conducted under contract with land-grant colleges, universities, cooperatives, and private research organizations. During this reporting period, contracts were in effect with Iowa State University, Oregon State, and one private research company.

STATE EXPERIMENT STATION PROGRAM

At the present time there are 20 projects in 16 States that deal with organization and management of cooperatives.

A number of State stations obtain information on the operations of cooperatives in their State. Their annual reports are studied and their balance sheets and operating statements are analyzed for trends and danger signals. Some State stations are analyzing cooperative organization and trends from the historical perspective.

A large part of the research in this area is devoted to the financing problems of cooperatives. This involves critical study of the financial structure and financing methods of cooperatives to determine which are most satisfactory from the standpoint of providing adequate capital for growth and treating patrons equitably. An effort will be made to develop alternative pricing and credit procedures for dealing both with members and nonmembers and to test pooling procedures and revolving capital plans consistent with sound financial management and equitable treatment of members. Changes in State and Federal laws affecting the tax status of farmers are receiving attention.

In cooperative management, investigations are being made into the kinds and nature of records kept by cooperatives and their usefulness as sources of information in performing management functions of planning and control. Research is still progressing in the area of manager-board of directors relationships and the responsibility of each.

Studies are in progress on membership participation, control, and communications for the purpose of developing guides to maintaining membership interest and effective control of their cooperatives. One project deals with the social aspect of cooperatives in order to determine their impact on people's lives in the broader sense.

A recent project will seek to identify and summarize the low-income farm problem in the State and to describe some of the present economic and socio-economic relationships existing between low-income farmers and the

farmer cooperatives to which they belong. From this the project leader expects to develop criteria with which to evaluate the cooperatives' performance in serving their low-income farmer-members and nonmembers .

A total of 7.0 professional man-years are being devoted to research in this area.

REPORT OF PROGRESS FOR USDA AND COOPERATIVE PROGRAMS

A. Organization and management

Interest in mergers, acquisitions, and consolidations among agricultural cooperatives is at an unprecedented high level. A study has been initiated that will analyze stated versus achieved objectives of farmer cooperative mergers, and factors involved in both successful and unsuccessful mergers. This study is being conducted under a cooperative agreement with Oregon State University.

A study was completed of the criteria used by various agencies in the Department of Agriculture, and the Farm Credit Administration, for determining the distinguishing features of a cooperative. A consensus definition of a cooperative was developed. In addition, seven criteria were outlined which, taken together, can serve as cooperative operating guidelines.

A case study of the management structure and policies of a federated Spanish cooperative was completed. The study was made at the request of the Foreign Agricultural Service in connection with an application submitted under the Title IV, PL 480 program. It was concluded that the cooperative's management, including its hired executives as well as its elected officials, is competent to carry out the objectives of the Title IV proposal.

B. Cooperative financing

1. Capital structure. Work continued on a nationwide survey of the capital structure of all farmer marketing, farm supply, and related service cooperatives. A report was released covering 105 farm supply regionals; significant findings were summarized in the 1964 Progress Report. Preliminary findings covering 448 regional marketing, diversified, tobacco, service, and bargaining, as well as the farm supply regional cooperatives previously reported, indicate that this group of cooperatives had total assets of \$3 billion at fiscal years ended in 1962, of which 50 percent was financed by net worth. Combined borrowed capital amounted to \$619 million, with the banks for cooperatives providing approximately 60 percent. Net savings amounted to \$288 million, which represented a 19.2 percent return on net worth. The 448 associations had a combined business volume of almost \$10 billion from services provided to nearly 3 million patrons.

2. Patronage refunds. Patronage refunds represent a practical means of returning to patrons of a cooperative the net savings resulting from operations. A study of the equitability of patronage refund distribution methods was initiated. It is designed to analyze procedures used by cooperatives in making patronage refunds; determine the various criteria used by cooperatives in calculating and allocating patronage refunds; and develop guidelines for computing, allocating, and distributing patronage refunds to attain improved equity among patrons.

C. Cooperative trends

Total business volume and memberships of farmer marketing, purchasing, and related service cooperatives increased during the 1962-63 period, while the number of cooperatives decreased slightly.

The total gross volume of business of these cooperatives was \$18.3 billion, an increase of 6.6 percent for the year. After excluding interassociation business, the total net volume was \$13.8 billion, an increase of 6.3 percent from 1961-62 and 70 percent over the \$8.1 billion total net business reported in 1950-51.

The number of cooperatives has declined, reflecting reorganizations involving mergers, consolidations, and acquisitions, as well as some dissolutions. These reorganizations have been made largely for the purpose of improving operations and expanding services to meet the changing needs of farmer patrons. The total number of farmer cooperatives dropped from 9,039 in 1961-62 to 8,907 in 1962-63, a decrease of 132 associations. In 1962-63, memberships in cooperatives increased by 119,770 over the preceding period and totaled 7,218,750.

A nationwide study to provide information on the extent of affiliation of local cooperatives with regional associations and regional associations with other regionals was completed. The last such study was made in 1950. In the succeeding period many regional cooperatives were newly organized and numerous reorganizations occurred among others. These developments resulted in new affiliations as well as extensive changes in earlier affiliations. The scope of these ties among farmer cooperatives is indicated by some general findings of the study. More than three-fourths of the 7,876 local cooperatives that operated during 1962-63 were affiliated with one or more regional cooperatives. Almost three-fifths of the 755 regional associations conducting business during the same period were affiliated with at least one other regional association and more than a fifth were affiliated with two or more regionals. Some regionals were affiliated with as many as eight other such organizations.

D. Improving membership relations programs of cooperatives

Farmer cooperatives depend on loyal member support, patronage, and understanding to keep them economically strong and healthy. In addition, the economic and legal climate in which they operate depends in part on how well cooperatives tell their story to the general public. Research is conducted to identify factors and techniques which motivate member loyalty and bring about public understanding of the nature of cooperatives as part of the American private enterprise system.

During the period under review, a three-phase study of the attitudes of Kansans toward cooperatives was underway.

In one phase, the various public and member information and education programs of Kansas cooperatives were reviewed. Twenty-four percent reported having some kind of planned member and public relations program. In 9 out of 10 instances reported, the manager both planned and carried out the program. Annual meetings were cited most frequently as means of keeping members and the public informed, followed by personal contacts with manager and employees, news advertisements, personal contacts with directors, and sponsored 4-H club activities, in descending order of use.

The second phase is a study of attitudes of urban leaders toward cooperatives. Two reports on this phase are being prepared. Responses of urban people to questions about the nature and operation of cooperatives showed relatively good understanding, mild feelings, and favorable attitudes. Responses to questions about the place and functions of cooperatives showed somewhat less understanding, somewhat stronger feelings, and slightly negative attitudes.

The third phase, a study of attitudes of farmers toward cooperatives, is underway.

E. Transportation and physical distribution of farmer cooperatives

1. Appraisal of alternative methods of product handling and transportation. Analysis of data is nearing completion on a study of transportation factors in marketing soybeans, cottonseed, and their products by farmer cooperatives. Preliminary findings of the study indicate that about 65 percent of the cottonseed shipped to selected mills originated within 50 miles of the mills. Transportation costs on outbound shipments of cottonseed crude oil from the mills averaged almost \$12 a ton. Two-thirds of the outbound volume of cottonseed crude oil moved by rail.

A report of findings on a nationwide study of transportation and other economic factors affecting locations of wool handling facilities was published. Principal findings of the study are: (1) Transportation charges

are one of the largest cost items in marketing raw wool, (2) installation of permanent baling facilities for grease wool appears advisable except in the smallest warehouses, and (3) scouring western wools locally does not appear advisable unless the scouring is performed to specification for established trade interests.

Field work was completed on a study of ownership and leasing of 202 covered hopper cars operated by six grain marketing cooperatives. All but 40 of the cars were leased. They are used primarily for transporting grain to distant markets.

A report of findings is nearing completion on a study of the physical distribution aspects of dry edible bean and pea marketing by cooperatives. Findings include methods that may be used by cooperatives in determining costs of moving products through their distribution systems and guidelines for developing least-cost distribution systems within a firm.

2. Loss and damage to agricultural products in transit. Research is nearing completion on a study of livestock loss and damage on movements from origins to first destinations. Preliminary findings show that while unloading facilities are similar at auction markets, country buying stations, public stockyards, and other first destinations, general operations and handling conditions vary and influence incidence of loss and damage to livestock.

A study of grain loss and damage in transit via rail and barge was completed. A report of findings, in process, shows grain handlers how to reduce losses by improving transportation and handling equipment and practices.

3. Motortruck operations and costs in hauling feed. Preliminary findings of a study completed on operating costs and practices of 110 bulk feed trucks operated by seven farmer cooperatives include: (1) Total truck operating costs, excluding administrative expenses, averaged 48 cents a mile operated, (2) operating costs averaged \$2.89 per ton of feed delivered, and (3) direct costs such as drivers' wages and fuel, oil and grease amounted to over three-fourths of total operating costs.

4. Traffic management in farmer cooperatives. A study is planned of traffic management departments in nine farmer cooperatives. The study is designed to determine the duties and performance of the traffic department, its place in the organizational structure, and knowledge and understanding at various management levels of the duties and responsibilities of the traffic department. These factors will be evaluated to determine the part the traffic department plays in such management decisions as market determination and expansion, plant and facility location, and product pricing.

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- Jones, A., and Richards, H. 1965. Scouring, Baling, and Transporting Western Wools. Marketing Research Report 723.

Line Project Check List -- Reporting Period October 1, 1964 to August 31, 1965

Work & line project number	Work and line project titles	Work locations during past period	Line proj.	incl. in
			Summary of progress	Area & sub- heading
a-1-1	<u>Research, service and educational assistance for cotton and oilseeds cooperatives</u>			
a-1-1-1 (Rev. #2)	Advisory and educational assistance on current organizational and operational problems of cotton marketing cooperatives	Ariz., Ark., Calif., Miss., N.Mex., Okla., Tex., Wash.,D.C.	Yes	1-D-E
a-1-1-4**	Organizational structure and operations of cotton cooperatives in Lubbock area of Texas	Tex., Wash.,D.C.	Yes	1-E
a-1-1-5*	Cooperative marketing and processing of cottonseed and soybeans and their products	Wash.,D.C.	Yes	1-E
a-1-2	<u>Research, service and educational assistance for dairy cooperatives</u>			
a-1-2-10 (Rev.)	Advisory and educational assistance to dairy cooperatives on their problems relating to organization, operations, procedures and policies	Fla., Iowa, Miss., N.Y., Va.	Yes	1-A-B-C D-E
a-1-3	<u>Research, service and educational assistance for frozen food locker cooperatives</u>			
a-1-3-4 (Rev. #2)	Frozen food locker and freezer provisioning plants in a national emergency	Wash.,D.C.	No	2-C
a-1-3-6 (Rev. #2)	Advisory and educational assistance to frozen food locker and related processing and merchandising cooperatives	Ill., Va., Wash.,D.C.	No	2-E
a-1-3-9	The role and methods of locker and related processing cooperatives in processing and merchandising locally produced food products	Ill., Wash.,D.C.	Yes	2-D
a-1-4	<u>Research, service and educational assistance for fruit and vegetable cooperatives</u>			
a-1-4-15 (Rev.)	Advisory and educational assistance to fruit, vegetable, and nut cooperatives on organizational and operational problems	Maine, N.Mex., N.Y., Wash.,D.C.	Yes	1-A-C-E
a-1-4-17	Scope and potentials in marketing fruits, vegetables, and nuts by cooperatives	N.Y., N.C., Pa., Wash.,D.C.	Yes	1-C
a-1-5	<u>Research, service and educational assistance for grain cooperatives</u>			
a-1-5-5 (Rev. #2)	Comparative operating efficiency of regional grain cooperatives	United States	Yes	1-A-E
a-1-5-8 (Rev.)	Accounting exercises for cooperative grain elevator personnel	Midwestern States	No	1-E
a-1-5-10	Comparative operating efficiency of coopera- tive soybean oil mills	Midwestern and Southern States	Yes	1-D

Line Project Check List -- Reporting Period October 1, 1964 to August 31, 1965

Work & line project number	Work and line project titles	Work locations during past period	Line proj. incl. in	
			Summary of progress	Area & sub-heading
a-1-6	<u>Research service and educational assistance for livestock and wool cooperatives</u>			
a-1-6-12 (Rev.)	Operations and organization of the National Wool Marketing Corporation and affiliated State and regional wool marketing cooperatives	United States	No	1-E
a-1-6-17	Advisory and educational assistance to livestock and wool cooperatives on their problems relating to organization, operations, procedures, and policies	United States	Yes	1-C-D
a-1-7	<u>Research, service and educational assistance for poultry cooperatives</u>			
a-1-7-12 (Rev.)	Advisory and educational assistance to poultry cooperatives on their problems relating to organization, operations, procedures and policies	Conn., Maine, Mass., Mo., N. H., Wash., D.C.	Yes	1-A-C-E
a-1-7-16	Organizational structure, operations and accomplishments of Western Farmers Association	Idaho, Oreg., Wash.	Yes	1-E
a-1-8	<u>Research, service and educational assistance for cooperatives handling special crops</u>			
a-1-8-5 (Rev.)	Advisory and educational assistance on organizational and operational problems of special crops cooperatives	Vt., Wash., D.C.	No	1-C-E
a-1-8-8*	Advisory and educational assistance on organizing and operating forestry-based cooperatives	Mich., Minn., Wis., Wash., D.C.	Yes	1-C
a-1-9	<u>Research, service and educational assistance for farm supply purchasing cooperatives</u>			
a-1-9-9 (Rev.)	Annual information on organizational features, operations, and services of major regional farm supply cooperatives	Wash., D.C.	Yes	2-E
a-1-9-25 (Rev.)	Advisory and educational service on current organizational and operational problems of farm supply cooperatives	Iowa, Kans., Md., Mass., N. H., Ohio, Wash., D.C.	Yes	2-A
a-1-9-27 (Rev.)	Analysis of effective distribution system and fieldmen services of regional cooperatives handling farm supplies	Wash., D.C.	No	2-B
a-1-9-30	Analysis of lawn and garden services provided by farm supply cooperatives	Wash., D.C.	No	2-B
a-1-9-32	Evaluating fertilizer bulk blending and spreading operations of farmer cooperatives	Minn., Wis., Wash., D.C.	No	2-B

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Work & line project number	Work and line project titles	Work locations during past period	Line proj. incl. in	
			Summary of progress	Area & sub-heading
a-1-9-33*	Study of liquid pesticide formulating and distribution by cooperatives	Miss., Tex.	Yes	2-B
a-1-9-34*	The place of cooperatives in the fertilizer industry	United States	Yes	2-C
a-1-9-35*	Pricing of feed and fertilizer by cooperatives	Ga., Ind., Ky., Miss., N.Y., N.C., Ohio, Tenn., Va., W.Va.	Yes	2-B
a-1-10	<u>Research, service and educational assistance for cooperatives providing rural services</u>			
a-1-10-4 (Rev.)	Advisory and educational assistance on current organizational and operational problems of farm business service cooperatives	Ill., Wash., D.C.	Yes	2-E
a-1-10-9*	Characteristics and opportunities of cooperatives serving low income farmers	Va., W.Va., Wash., D.C.	Yes	2-C
a-1-11	<u>History and statistics of cooperation</u>			
a-1-11-2**	Maintenance of file on cooperative source material	Wash., D.C.	No	3-C
a-1-11-4 (Rev.)	Service and educational assistance in developing and disseminating statistical information on agricultural cooperation	Wash., D.C.	No	3-C
a-1-11-9	Trends in fertilizer manufacturing and distribution by farmer cooperatives	Wash., D.C.	Yes	2-C
a-1-11-10**	Survey of extent of local affiliation with regional cooperatives	Wash., D.C.	Yes	3-C
a-1-11-11	Annual statistical survey of farmer marketing, farm supply, and related service cooperatives	Wash., D.C.	Yes	3-C
a-1-12	<u>Research, service and educational assistance on business administration problems of cooperatives</u>			
a-1-12-14 (Rev.)	Advisory and educational assistance on current organizational and operational problems of cooperatives	Wash., D.C., Spain	Yes	3-A
a-1-12-17	Analysis of financial structure of farmer cooperatives	United States	Yes	3-B
a-1-12-19	Developing educational and interpretive material to assist farmer cooperatives to comply with Federal income tax laws	Wash., D.C.	No	3-B
a-1-12-20*	Evaluation of the equitability of patronage refund distribution methods employed by farmer cooperatives	Wash., D.C.	Yes	3-B

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Work & line project number	Work and line project titles	Work locations during past period	Line proj. incl. in	
			Summary of progress	Area & sub-heading
a-1-12-21*	Analysis of the stated versus achieved objectives of farmer cooperative mergers	Oreg., Wash., D.C.	Yes	3-A
a-1-13	<u>Research, service and educational assistance on membership problems of cooperatives</u>			
a-1-13-4 (Rev. #2)	Preparation of educational material on agricultural cooperation for youth groups	Wash., D.C.	No	3-D
a-1-13-5 (Rev. #2)	Leader training in cooperative membership programs	Fla., Hawaii, Ill., Iowa, Kans., La., N.J., Minn., Mo., Mont., N.Y., Ohio, Tex.	No	3-D
a-1-13-12 (Rev.)	Providing professional advice and assistance on organization and conduct of research in cooperative membership relations	Ala., Ill., Kans., La., Miss.	No	3-D
a-1-13-13 (Rev. #2)	Planning training programs in agricultural cooperation for foreign nationals	Worldwide	No	3-D
a-1-13-14 (Rev.)	Helping farmer cooperatives to strengthen their membership relations programs and activities	Ariz., Hawaii, Mo.	No	3-D
a-1-13-18	Strengthening member and public relations programs of farmer cooperatives in Kansas	Kans.	Yes	3-D
a-1-14	<u>Research, service and educational assistance on transportation problems of cooperatives</u>			
a-1-14-7 (Rev. #2)	Analysis of transportation costs and practices in the development of marketing and purchasing programs of farmers' cooperatives	Idaho, Wash., D.C., Oreg., Wash.	Yes	3-E
1101	<u>Efficiency of farmers' business firms in marketing farm products</u>			
1101-21 (Rev.)	Improving methods of cooperative marketing agencies and growers in procuring containers and packaging supplies for fresh fruits and vegetables	Maine, Mich., N.J., N.Y., Ohio, Pa.	Yes	2-C
1101-22(C)**	A study on the economics of drying and storing rough rice	La., Wash., D.C.	Yes	1-D
1101-24	Evaluating alternative methods and costs of distributing feed in bulk	Calif., Ill., N.Y., Ohio, Oreg., Pa., Wash.	Yes	2-D
1101-26	Costs and economic effects of storing seed cotton by improved methods, with emphasis on cooperative gins	Calif., Tex., Wash., D.C.	Yes	1-D
1101-27**	Labor utilization at cottonseed oil mills	Cotton producing States, Wash., D.C.	No	1-D

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Work & line project number	Work and line project titles	Work locations during past period	Line proj. incl. in	
			Summary of progress	Area & sub- heading
1101-28(C)	Appraisal of the operations of local cooperative buying groups of farmers in purchasing feed ingredients and formula mixed feeds	Calif., Ill.	Yes	2-B
1101-29*	Improving methods of cooperative marketing agencies in procuring containers and packaging supplies for processed fruits and vegetables	Wash., D.C.	Yes	2-C
1101-30*	Development of improved costing procedures and information systems for cooperative dairy manufacturing plants	Wash., D.C.	Yes	1-D
3101	<u>Developing more efficient use of transportation services and facilities by farmers' marketing agencies</u>			
3101-9 (Rev.)	Analysis of practices of cooperatives in marketing and purchasing seeds and recommendations for improvements	Calif., Ga., Ind., La., Minn., Miss., N.C., Tenn., Va.	Yes	2-D
3101-10 (Rev.#2)	Relation of transportation and handling practices and conditions in moving livestock from farms to initial destinations and processing plants to loss and damage	Colo., Iowa, Minn., Mont., Nebr., N.Dak.	Yes	3-E
3101-13	Determination of costs, characteristics and efficiency of transportation of agricultural commodities by farmer cooperatives	Calif., Ill., N.J., N.Y., Oreg., Wash.	Yes	3-E
3101-14**	Relation of specific handling practices and conditions to loss and damage to grain in transit to and from country and terminal elevators	Iowa, Minn., Nebr., N.Dak., S.Dak.	Yes	3-E
3101-15	Evaluation of traffic management in farmer cooperatives	Wash., D.C.	Yes	3-E
3101-16(C)	Evaluating transportation factors in marketing soybeans, cottonseed, and their products by farmer cooperatives	Ark., Iowa, Minn., Miss., Mo., Okla., Tex.	Yes	3-E
3101-17	Farmer Cooperative Service cooperation in SM-29, "Optimal Adjustments of Southern Grain Marketing Facilities to Present and Future Conditions"	Southeastern States	Yes	1-B
3102	<u>Pricing plans and methods of farmers' marketing agencies</u>			
3102-13(C)**	Evaluating adjustments in grower payment methods of Florida citrus marketing organizations as a result of the 1962 freeze	Fla., Wash., D.C.	Yes	1-B

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Work & line project number	Work and line project titles	Work locations during past period	Line proj. incl. in	
			Summary of progress	Area & sub-heading
3102-14	Study of pooling and producer payment practices of egg marketing cooperatives and others	Calif., Fla., Ga., Iowa, Mich., Miss., N.C., Ohio, Oreg., Va., Wash., Wis., Wash.,D.C.	Yes	1-B
3102-15	An appraisal of functions and potentialities of broiler auctions	Del., Ga., Md., Pa., Va., W.Va., Wash.DC.	Yes	1-C
3102-16	Evaluation of principles and methods used by dairy cooperatives in pooling marketing costs and sales returns	Wash.,D.C.	Yes	1-B
3102-17*	An appraisal of the status, role, capabilities, and future of cooperative bargaining associations	Wash., D.C.	Yes	1-B
3103	<u>Improving processing and storage facilities and techniques of farmers' marketing agencies</u>			
3103-20	Developing methods and data frozen food locker and related small processing firms need for improving facilities planning and product handling	Iowa, Wash.,D.C.	Yes	2-E
3103-21	Study of facilities and operations of locker and freezer provisioning firms in the United States	Wash., D.C.	Yes	2-C
3103-22	Inventory control practices and policies at local grain cooperatives	Major grain producing areas	Yes	1-E
3104	<u>Improving distribution methods and facilities of farmers' marketing firms</u>			
3104-14	Alternatives for cooperatives and livestock producers in integrating production and marketing livestock and meat	United States	Yes	1-D
3104-15**	Appraisal of opportunities and development of methods for improving fowl marketing of cooperatives and other handlers	Wash., D.C.	Yes	1-B
3104-18	The influence of changing procurement practices on the marketing of Florida fresh citrus fruits	Wash., D.C.	Yes	1-D
3104-20**	An appraisal of the influence of credit upon sales volume in locker and freezer provisioning organizations	Wash., D.C.	No	2-B
3104-22	Farmer Cooperative Service cooperation in NEM 28 (Analysis of trends pointing to future consumption and market potential for meats in the Northeast)	Northeastern States, Wash.,D.C.	No	1-C
3104-24(C)*	Factors influencing wool marketing decisions of Iowa farmers	Iowa	Yes	1-B

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			Summary of progress	Area & sub-heading
3104-26	Organizational structure, operations and potentials of coordinated fruit and vegetable marketing programs	Wash., D.C.	Yes	1-C
3104-27	FCS Cooperation in NCM-26, "Changing market structure and organization of Midwest dairy industry"	Midwestern States, Wash., D.C.	No	1-C
3104-28	An appraisal of coordinated marketing activities used by dairy cooperatives	Wash., D.C.	No	1-A-C
3104-29*	A determination and evaluation of the role of cooperatives in the market structure of selected major potato producing areas of the United States	Maine, Wash., D.C.	Yes	1-C
3104-30*	Improving coordination of sales and distribution of dairy products manufactured by dairy cooperatives	Wash., D.C.	Yes	1-B
0-0-1(DC) (C)**	Economic feasibility for cooperative livestock feedyards and slaughter facilities	Mont., N.Dak., Wash., D.C.	Yes	1-C
0-0-2(DC) (C)	Economic feasibility for cooperative forest based management, marketing, and processing enterprises	W.Va., Wash., D.C.	Yes	1-C

*Initiated during reporting period.

**Discontinued during reporting period.